CHAPTER 16 SUMMARY OF HES 2000 RECOMMENDATIONS

The following table summarizes the recommendations of *HES 2000* based on the discussion in the preceding chapters. Recommendations are organized by chapter. For each recommendation, the organizations that are encouraged to take action are indicated in first column. For the convenience of the organizations involved, recommendations are listed alphabetically within chapters by the name of the first lead organization. The second column lists the recommendation, and the third column lists the section in the text upon which the recommendation is based.

Suggested Lead Organization (s)	Recommendation	Reference Section
Chapter 1 The State of Hawaii Energy Program, Hawaii Energy Strategy 2000, and the Hawaii Climate Change Action Plan		
DBEDT and OP for consideration of Legislature	Propose a new State Energy Objective related to climate change	1.3.6.1
DBEDT, DLNR, other State agencies, Counties, and interested stakeholders	Continue the Hawaii Climate Change Action Program and participation in U.S. Environmental Protection Agency's State and Local Climate Change Partners' Program	1.3.6.2
DBEDT, DOH, DLNR, other State agencies, Counties and interested stakeholders	Set Hawaii Greenhouse Gas Reduction Goals with public input	1.3.6.3
DBEDT, DOH, DLNR, other State agencies, Counties and interested stakeholders	Identify future effects of climate change on Hawaii and plan adaptation measures	1.3.6.4
Chapter 4 Energy for Ground Transportation		
City and County of Honolulu and other Counties	Continue efforts to increase use of mass transit	4.5.2.1
DBEDT and DOA	Encourage production and sale of 10% ethanol blend gasoline in Hawaii	4.6.2.2
DBEDT	Continue to assist fleets in complying with EPACT requirements for alternative fuel vehicles	4.6.2.4
City and County of Honolulu, DBEDT, and other participants	Support the Honolulu Clean Cities Program	4.6.2.5
DBEDT and Counties	Publicize incentives for owning alternative-fuel vehicles	4.6.2.1
DBEDT, Counties, HEVDP, and electric utilities	Encourage early deployment of electric vehicles in Hawaii	4.6.2.3

Suggested Lead Organization (s)	Recommendation	Reference Section
Chapter 4 Energy for Ground Transportation (Continued)		
Legislature, DBEDT and DOH	Consider increasing the visibility of driving costs	4.5.1.1
Legislature, DBEDT and DOH	Increase information on the environmental costs of vehicle fuel-use with a new Environmental Impact Information Sheet	4.5.1.2
State DOT and Counties	Improve the bicycle transportation system	4.5.2.2
State DOT, OMPO and Counties	Reduce congestion through the use of transportation control measures (TCMs)	4.5.2.4
State DOT, OMPO and Counties	Develop estimates of energy- and emissions-saving effectiveness of TCMs to help prioritize their potential use	4.5.2.5
State Land Use Commission, OP, DLNR, DOT and Counties	Use land use planning to reduce traffic congestion and the need for transportation	4.5.2.3
Vehicle dealers	Encourage purchase and use of fuel-efficient conventional vehicles and hybrid vehicles	4.5.1.3
Chapter 5 Energy for Air Transportation		
Airlines	Maintain improved load factors and continue operational changes for fuel efficiency (Actions have been taken)	5.5.1.1, 5.1.1.2
Airlines	Adopt operating measures to increase fuel efficiency (Action has been taken)	5.5.2.1
Airlines	Maintain high load factors while increasing overall overseas capacity	5.5.2.2
Airlines and DOT	Use newer, more efficient aircraft on overseas routes	5.5.2.4
Hawaii Congressional Delegation and Legislature	Ensure that proposals for carbon taxes on aviation fuels do not adversely affect Hawaii	5.4.2.1
Interisland airlines	Re-equip interisland airlines with newer, more efficient aircraft	5.5.2.3
Chapter 6 Energy for Marine Transportation		
Hawaii Congressional Delegation and Legislature	Ensure that proposals for carbon taxes on marine fuels do not adversely affect Hawaii	6.4.1.3
Shipping companies	Adopt technical improvements to ships	6.4.1.2
Shipping companies	Consider changes in operating procedures for energy efficiency	6.4.1.1
Chapter 7 Generating Electricity for Hawaii		
Electric utilities, State Land Use Commission, OP, Public Utilities Comm., Counties, and stakeholders	Identify, designate, and permits for sites for future electricity generation, consistent with Integrated Resource Plans	7.10.3
Electric utilities and non-utility generators (NUGs)	Continue diversification of fuels used for electricity generation in Hawaii	7.4.3.1
Electric utilities and NUGs	Continue to pursue greater efficiency in fossil fuel central station generation	7.11.2.1

Suggested Lead Organization (s)	Recommendation	Reference Section
Chapter 7 Generating Electricity for Hawaii (Continued)		
Electric utilities and NUGs	Increase use of renewable energy for electricity generation in Hawaii	7.4.3.2
Electric utilities and NUGs, and large electricity users	Pursue greater efficiency through distributed generation (small cogeneration, microturbines, and fuel cells)	7.11.2.3
Public Utilities Commission, Electric Utilities, The Gas Company	Utility Integrated Resource Planning should consider cost-effective, energy-efficient fuel substitution between electricity and gas	7.11.2.2
Public Utilities Commission and participants	Continue examination of electricity competition for Hawaii	7.2.2.5
Public Utilities Commission and utilities	Review utility costs and require utilities to report on actions taken to reduce revenue requirements	7.2.2.4
Chapter 8 Increasing Renewable Energy Use in Hawaii		
DBEDT, electric utilities, and renewable energy industry	Continue to assess the need for state income tax credits for renewable energy beyond 2003	8.5.2.1
DBEDT, electric utilities, and solar water heating industry	Continue to increase use of solar water heating	8.5.3.1
Electric and Gas Utilities	Obtain accurate cost data for renewable energy options for Integrated Resource Planning	8.5.1.1
Hawaii Congressional Delegation	Encourage the use of renewable energy through federal tax credits	8.5.2.2
HECO and renewable energy developers	Consider renewable energy options for Oahu	8.4.2.2
HELCO and renewable energy developers	Consider renewable energy options for the Island of Hawaii	8.4.3.2
KE and renewable energy developers	Consider renewable energy options for Kauai	8.4.3.2
Legislature and Public Utilities Commission	Consider implementing a Renewable Portfolio Standard, a Public Benefits Charge, or Green Pricing to Increase Renewable Energy Use	8.5.3.3
MECO and renewable energy developers	Consider renewable energy options for Maui	8.4.4.2
Public Utilities Commission and organizations as identified by report	Implement recommendations of renewable resource docket	8.5.2.2
Chapter 9 Electricity Competition and Hawaii		
Public Utilities Commission	Consider restructuring Hawaii's electricity system	9.5.6

Suggested Lead Organization (s)	Recommendation	Reference Section
Chapter 10 Utility and Bottled Gas in Hawaii		
DBEDT, The Gas Co., and distributed generation manufacturers	Encourage use of gas as a fuel for distributed electricity generation, cogeneration, and/or fuel cells where it is cost-effective and energy efficient	10.7.2
The Gas Co., renewable energy developers, and DBEDT	Encourage cost-effective renewable energy substitution for synthetic natural gas and propane	10.7.1
Public Utilities Commission, Electric Utilities, and The Gas Co.	Utility IRPs should consider cost-effective, energy-efficient fuel substitution between electricity and gas	10.7.3
Chapter 11 Increasing Energy Efficiency in Hawaii's Buildings		
Building industry	Encourage continued use of HiLight software program to ensure Model Energy Code compliance in lighting design	11.2.1.5
Counties	Adopt Model Energy Code for Maui County (currently under consideration) and adopt Residential Building Model Energy Code in all Counties	11.2.1.4
Counties with DBEDT support	Continue and expand County government energy efficiency programs	11.2.4.1
DBEDT, the Utilities, Design Professionals, and the Building Industry	Continue Transfer of Advanced Building Technologies and Development of Design Guidelines	11.2.3.2
DBEDT	Continue to expand energy efficiency technical education and training programs	11.2.3.5
DBEDT	Continue Solid Waste Reduction and Recycling Programs	11.2.3.6
DBEDT and Counties	Continue to evaluate impact of and improve the rate of compliance with Model Energy Code	11.2.1.6
DBEDT and partner organizations	Continue to support State participation in Rebuild America and other public-private partnerships and alliances to improve resource efficiency	11.2.3.4
DBEDT and State agencies	Increase efforts by State government to improve energy efficiency by meeting State goals for reduction of energy use in State facilities	11.2.3.1
DBEDT and State Agencies, and Finance Companies	Expand Hawaii State government energy Performance Contracting and alternative financing for energy projects	11.2.3.3
DBEDT, Utilities, Building Industry, and Design Professionals	Investigate new measures and practices for building energy efficiency	11.3.2
DBEDT, Utilities, Building Industry, and Design Professionals	Continue transfer of advanced building technologies and development of design guidelines	11.2.3.2
Federal agencies	Support energy efficiency programs in federal facilities in Hawaii	11.2.5.3
Utilities and DBEDT	Continue to support cost-effective utility Demand-Side Management programs	11.2.2.5

Suggested Lead Organization (s)	Recommendation	Reference Section
Chapter 12 Energy Emergency Preparedness		
DBEDT	Continue to progress in hazard mitigation to reduce Hawaii's energy system vulnerability	12.4.6
DBEDT	Continue to support the Hawaii Energy Council's readiness and its application to other jurisdictions	12.4.1
DBEDT and Hawaii, Honolulu, and Maui Counties	Continue to work with Counties to complete administratively approved County EEP plans	12.4.8
DBEDT and Energy Council	Develop an ESF-12 concept of operations for activating DBEDT staff during a disaster or market shortage	12.4.7
DBEDT and USDOE	Continue to work with USDOE to provide for rule making to implement SPR priority access sales provisions	12.4.2
DBEDT, State Civil Defense, and Young Brothers	Complete the Young Brothers' emergency generator hazard mitigation project	12.4.5
DBEDT, State Civil Defense, Counties, and industry participants	Complete emergency generator inventories and database documentation of emergency and essential service facilities	12.4.4
DBEDT, State Civil Defense, Counties, and industry participants	Continue to regularly exercise government and industry EEP plans; emphasize preparedness on the local (first responder) level	12.4.3
Chapter 13 Scenarios for Hawaii's Energy Future		
DBEDT, airlines, auto manufacturers and Hawaii Congressional Delegation	Support efforts to increase the fuel efficiency of aircraft and ground vehicles	13.6.4.2
DBEDT, electric utilities, NUGs, and renewable energy developers	Maximize renewable energy and Demand-Side Management in the electricity sector	13.6.4.3
DBEDT, electric utilities, NUGs, renewable energy developers, and Legislature	Consider implementing elements of Scenario C3	13.6.4.1
Chapter 14 Facilitating Exports of Sustainable Technology to the Asia-Pacific Region		
DBEDT	Continue to conduct market analyses and evaluation relevant to the needs of Hawaii firms interested in technology-based economic development	14.3.2
DBEDT	Continue to publish *The Hawaii Energy, Environmental, and Engineering Export Service Directory*	14.3.3
DBEDT	Strongly support and sustain the Millennium Workforce Development Initiative	14.3.7
DBEDT and partner organizations	Continue to conduct business and technical exchange missions, and reverse trade missions	14.3.4
DBEDT and partner organizations	Actively advise and promote Hawaii energy and environmental companies	14.3.6
DBEDT and partner organizations	Establish a Center for Asia-Pacific Infrastructure Development in Hawaii	14.3.8

Suggested Lead Organization (s)	Recommendation	Reference Section
Chapter 14 Facilitating Exports of Sustainable Technology to the Asia-Pacific Region (Continued)		
DBEDT, Federal agencies, and NGOs	Continue to take advantage of Federal and NGO support for State energy and technology export initiatives	14.3.1
East-West Center and DBEDT	Continue to promote sustainability programs in cooperation with the East-West Center Asia-Pacific Economic Cooperation Program	14.3.9
Hawaii State Legislature	Formalize the STMAD process	14.3.5
Chapter 15 Energy in Hawaii and Future Technology		
UH HNEI, PICHTR, NELHA, USDOE, County of Hawaii	Support deep-ocean carbon sequestration research and possible future installation of a pilot facility in Hawaii	15.4.4.1
The Electric Utilities, Renewable Energy Developers, and USDOE	Conduct RD&D on renewable energy technology using Hawaii's abundant renewable energy resources	15.4.4.2
The Electric Utilities, Renewable Energy Developers, and USDOE	Conduct rapid-payback building-efficiency RD&D in Hawaii	15.4.4.3
Vehicle manufacturers, electric utilities, Hawaii transportation companies, and USDOE	Conduct RD&D on clean energy and transportation-energy efficiency to reduce Hawaii's overdependence on oil	15.4.4.4
Electric utilities, NUGs, generator/ fuel cell manufacturers, and USDOE	Conduct RD&D on electricity system efficiency, distributed generation, and clean energy for electricity generation in Hawaii	15.4.4.5